Group Performance Task: Complex Area

**Geometry**

**Due: In Class. 5/9/17**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

This cylinder has a hole cut from it in the shape of a rectangular prism. The cylinder is 12 cm in diameter and 15 cm long. The base of the rectangular prism has a length of 10 cm and a width of 2 cm.



1) How many surfaces would the cylinder have if it did not have the hole cut from it?

2) How many additional surfaces are created by the hole?

3) What is the surface area of one circular base after having the hole cut from it? Show your work.

4) What is the surface area of the lateral surface of the cylinder? Show your work.

5) What is the surface area of the hole? Show your work.

6) The cylinder with the hole cut from it is going to be dipped into a vat of paint. What is the surface area of the cylinder that will be covered in paint? Show your work.